USAID Biotechnology Programs

FROM THE AMERICAN PEOPLE

USAID helps build the capacity of developing country partners in Africa and Asia to undertake agricultural research and bring small-holder farmers the benefits of modern biotechnology and genetic engineering. We work with National Agricultural Research Systems and other in-country partners to develop new crop varieties that will increase the competitiveness of the agricultural sector, to provide training and material support, and to maximize local ownership of the products. A snapshot of current biotech crop development programs includes:

Eggplant/Brinjal, Credit: Saharah Moon Chapotin/USAID

- Insect resistant eggplant in India, Bangladesh and the Philippines - will allow farmers to reduce pesticide use while increasing yields and incomes.
- Disease resistant banana in Uganda - can provide resistance to black sigatoka, an airborne fungal disease reducing crop yields by 30-50 percent.
- Virus resistant cassava in Kenya and Uganda - cassava mosaic and brown streak viruses cause widespread losses throughout Africa.
- Insect resistant cowpea in Nigeria - biotechnology provides a highly effective solution to prevent insect damage to this important crop.
- Insect resistant potato in South Africa - to avoid significant field-level damage and tuber losses during storage due to potato tuber moths.
- Nitrogen use efficient, salt tolerant and drought tolerant rice in sub-Saharan Africa - a public-private partnership that will result in higher rice productivity and less expenditure on inputs such as fertilizer.
- Nitrogen use efficient maize in sub-Saharan Africa - will result in higher yields with less fertilizer in nutrient poor soils of Africa.
- Disease resistant potato in India, Bangladesh and Indonesia - will improve yields with less need for pesticides in an important staple crop.
- Stress tolerant rice and wheat in South Asia - using molecular breeding and genetic engineering, new varieties are being developed to help farmers increase cereal crop yields under a changing climate while conserving water, energy, soil health and using less fertilizer.
- Virus resistant papaya in the Philippines - to avoid significant yield loss from the papaya ringspot virus as natural resistance has not been identified.
- Biofortified crops - USAID supports the Harvest Plus consortium in developing crops such as cassava, maize, rice and millet that are fortified with zinc, iron and vitamin A.

Farmer inspects a cassava plant, Credit: Danforth Plant Sciences Center

Female farmers work in a rice paddy in Bangriposhi, India, Credit: Anindya Phani, Courtesy of Photoshare

For More Information on USAID Biotechnology Programs
Visit: http://www.usaid.gov/our_work/agriculture/biotechnology
Contact: biotechnology@usaid.gov

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Biosafety Programs

USAID supports biosafety regulatory framework development to increase capacity for assessing and managing risk, but also to build regulatory systems that facilitate access to technology, remove barriers to food aid and trade, and enable access by the farmers with the greatest need. USAID support for biosafety capacity building includes the following programs:

A woman weeds a field in Karonga, Malawi
Credit: David Snyder, Courtesy of Photoshare

Program for Biosafety Systems (PBS)

Managed by the International Food Policy Research Institute (IFPRI), PBS works with local agricultural organizations and stakeholders to build functional science-based regulatory pathways for the adoption of new biotechnology products. Its diverse team of scientific, legal, commercial and communications experts build biosafety capacity through an integrated program of policy analysis, development and implementation for practical, achievable results. Activities are designed and implemented through a "feet on the ground", country-led approach. With an ability to draw on an in house independent policy research team at IFPRI, PBS brings added value and academic credibility for informed decision making. PBS is currently active in Africa and Asia, with country programs in Kenya, Malawi, Uganda, Ethiopia, Mozambique, Nigeria, the Philippines, Indonesia and Vietnam.

PBS Online: http://programs.ifpri.org/pbs/

South Asia Biosafety Program (SABP)

Through SABP, USAID provides assistance to further strengthen the institutional governance of biotechnology in India and Bangladesh. SABP works with government regulatory agencies to address technical capacity needs related to the safety assessment of biotech crops within an efficient, transparent and responsive regulatory framework, and engages with the academic and regulatory communities to study policy issues of importance such as food labeling or the impact of agricultural biotechnology on trade in SABP's partner countries. Through training workshops with members of the research community and agricultural extension workers, SABP aims to increase understanding and participation in applying biotechnology to address agricultural problems.

Female cotton farmer works in Rajasthan, India
Credit: Kanu Bharti, Courtesy of Photoshare

SABP Online: http://cera-gmc.org/index.php?action=s._asia_biosafety_program

Regional Initiatives

PBS and other USAID projects currently work with regional organizations in Africa and Asia such as ECOWAS, COMESA and APEC on regionally-led efforts to evaluate new technologies and harmonize biosafety regulations. These increase efficiencies of scale and reduce barriers to trade of biotech products that benefits all member countries.

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